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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,142	06/27/2001	Catherine Hedouin	022701-892	7739

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BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
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EXAMINER

WRIGHT, WILLIAM G

ART UNIT PAPER NUMBER

1754

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,142

Applicant(s)

HEDOUIIN ET AL.

Examiner

William G. Wright SR.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10, 11 and 21-24 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-9 and 12-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kintaichi et al. '145 in view of Chemical Abstracts 115:77073b.

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Kintaichi teaches in a nitrogen oxide reduction process the utility of aluminates, to include zinc aluminate at column 5 of the reference. The process is taught to be performed in a system using the aluminate composition. The teaching of additives is found at column 4 line 40 et seq. The general teaching of the utility of high surface area being preferred is found at column 4 line 56 et seq. The method of making of the material is taught to be any conventional method at column 5 line 39 et seq. To include the alkoxide method with hydrolysis is taught at column 5 line 50 et seq. The teaching of optimum calcinization temperature is found at column 6 line 24 et seq.

The Kintaichi reference lacks the specific teaching of the instant surface area as taught in the instant claims.

The Chemical Abstracts article teaches the utility of zinc aluminate as a catalyst. The catalyst is taught to have a high surface area of 290 m²/g.

The taught products have the instantly claimed surface area and therefore appear to be substantially identical, absent a showing to the contrary, In re Best, 195 USPQ 430.

Kintaichi teaches it is preferred to have a high surface area at column 4 line 57 et seq., thus providing a motivation to acquire a high surface area for the catalyst. The Chemical Abstracts article teaches in a zinc aluminate catalyst the feature of high surface area at 290 m²/g. It would be obvious to

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one skilled in the art desiring a high surface area to use the teaching in the Chemical Abstracts article to arrive at the catalyst of the instant claims. It is desirable to have a high surface area due to catalysts being dependent on the reactants contacting the catalyst. Thus the need and desirability of a high surface area is well known in the catalysis art.

Applicants argue that Kintaichi lacks a teaching of the instantly claimed reference surface area. Further the applicants argue the presence of a thermal stability in their material. Such a presence must be shown to exist in the form of data to distinguish the instant composition from the compositions of the reference. The supporting reference teaches temperatures up to 700°C and there is no indication that when higher temperatures are used that the surface area will not be at the 50 m²/g or higher level. The teaching of 290 m²/g is so much greater than 50 m²/g that it would be expected that an increase of 100°C in the calcinization temperature to 800°C or even higher would not reduce the 290 m²/g surface area to less than 50 m²/g. There is no explicit teaching in the Chemical Abstracts article that it lacks thermal stability at any temperature above 700°C. The article teaches that a surface area of 290 m²/g is present at a calcination temperature of 700°C or less. The Chemical Abstracts article in no way teaches that the surface area would degrade at 700°C or above.

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The applicants argue that the instant invention is thermally stable and even after exposure to temperatures of at least 800°C for 8 hours maintains a specific surface area of at least 85 m²/g. The applicants further argue that the Chemical Abstract article teaches its high surface area at 700°C or less, and that the instant file requires the zinc aluminate to be treated at 800°C or higher. Thus the applicants argue that the Chemical Abstract article teaches that the surface area stated in the Chemical Abstracts article is not maintained at higher calcination temperatures.

The Examiner argues that as the temperature increases, the surface area drops, however it is clearly taught in the Chemical Abstracts article at the Table of page 1037 (copy supplied) that when a 900°C calcination temperature is used, a specific surface area of 98 m²/g is reported. The applicants' arguments are not well taken and the rejection is maintained.

Applicants' arguments filed November 5, 2003 have been fully considered but they are not deemed to be persuasive.

The statements from the Examiner as to the non-persuasiveness of the applicants' response are found in the obviousness rejection of this Office action.

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The instant claims 10, 11 and 21-24 are allowed over the cited prior art. The instant claims 10, 11 and 21-24 require a process using a zinc salt, "sol" or "alkoxide" and an aluminum alkoxide. This mixture is hydrolyzed and thus forms a precursor composition, which may be calcined to form the aluminate. The cited prior art does not teach the claimed features of these claims.

THIS ACTION IS MADE FINAL. Applicants are reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a). The practice of automatically extending the shortened statutory period an additional month upon the filing of a timely first response to a final rejection has been discontinued by the Office. See 1021 TMOG 35.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE

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STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G. Wright, Sr. whose telephone number is (571) 272-1361. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1558. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9306 for the regular communications and (703) 872-9311 for after final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

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access to the private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

WGW

W. G. Wright, Sr.:cdc
February 6, 2004

SJB

STEVEN BOS
PRIMARY EXAMINER
GROUP 1100